REMARKS/ARGUMENTS

Claims 1-43 are pending in the application. Reconsideration and reexamination of the application are hereby respectfully requested.

In the Claims:

Independent claims 1, 15, and 28 are amended herein to reinforce that the air outlet/access port limitations in those claims are directed to ports for transmitting pressurized air out of the tank and to a load (a pneumatic tool for example) that consumes the pressurized air, and are distinct from any port that serves only to drain, empty, or vent a pressurized air tank, which vent/drain valves are well known in the art. The Applicants believe that the Examiner was already reading the relevant limitations in the intended narrower sense, so they assume that the current amendments alone may not alter his view of the rejections made in the July 10, 2006 Action. Therefore, in addition to the amendments made, the Applicants reply to those rejections as follows below.

A. Apparatus Claims 1-14

Claims 1, 2 and 13 stand rejected under 35 U.S.C. 103(a) as unpatentable over Nolan '437 in view of US 4,665,801 to Kojima. Additionally, Claims 3-12 and 14 stand rejected under 35 USC 103(a) as unpatentable over Nolan in view of Kojima, Moore and the Grainger catalog. Applicants traverse these rejection.

Independent claim 1 is amended herein to require: An air compressor assembly for providing compressed air to a load, comprising:

an air tank for containing air at an elevated pressure, the air tank having an air inlet port and an air outlet port and the air outlet port is positioned at a bottom portion of the air tank;

an air compressor for supplying air for storage in the air tank through a first tubing, the first tubing connecting the air inlet port to the air compressor; and

a second tubing connecting the air outlet port to a manifold assembly, the manifold assembly connectable to the load consuming compressed air ;

wherein compressed air in the air tank is discharged through the air outlet port, the second tubing, and the manifold assembly during air usage by the load.

Nolan '437 does not disclose an air outlet at the bottom of its air tank 24. Rather, Nolan '437 teaches the conventional location of its air outlet port 32 at the top of tanks 24. The Examiner acknowledges this (Action Para. 4) and argues that Kojima '801 teaches the provision of "an air outlet port (21) positioned at a bottom portion (clearly seen in figure 1) of a compressed air tank (3 and 4) and an open end of a hollow conduit (63)." Applicants respectfully disagree with the Examiner's characterization of the Kojima components cited.

Kojima's "opening 21 of a relatively large size [is adapted to hold an] air dryer device 22." Kojima '801 col. 3 lines 23-25. Air dryer 22 is located in opening 22 to serve as the principal inlet port (not outlet) to the storage tank 1. Compressed air enters tank 1 via dryer 22/23 through air inlet port 56. Kojima '801 col. 4 lines 58-64. Tube 63 and associated drain valve 57 serve only to blow down accumulated oil and condensate from the dryer 22/23. Kojima '801 col. 5 lines 10-35. In this function, drain valve 57 and tube 63 are essentially the same as Kojima's discharge cock 10 (Kojima '801 col. 2 lines 59-64). Moreover, Nolan '437 already discloses similar manually operable drain valves 30 in its tanks 24 (col. 3 lines 29-31).

Additionally, Kojima's drain valve 57 and tube 63 are not connected to a manifold assembly and do not serve as part of the outlet air flow path to any compressed air load served by the Kojima device. The air outlet for supplying loads of the Kojima air dryer unit is located at port 6. Kojima '801 col. 2 lines 56-59.

Furthermore, even if Kojima showed more than it does, alone or in combination with Nolan '801 it would not suggest the present invention. Kojima is an air dryer. The provision of an air dryer in a compressed air system is intended to prevent the accumulation of significant amounts of condensate in a compressed air tank and/or to

avoid entraining oil or water in the air supplied to a load. See Kojima '801 col. 1 lines 10-19. In contrast, the present invention is intended for use in compressed air systems (like Nolan '437) where no air dryer has been provided (to hold down cost and complexity) and where the loads can tolerate the entrainment of some condensate in the compressed air provided. *See* Specification Paras. 6 and 9. By locating its outlet port so as to deliberately entrain condensate in the compressed air sent to loads, the present invention is able to keep the tank interior dryer, but at the cost of making its compressed air unsuitable for some applications where dry air is required. Therefore, Kojima, if it suggests any modification of Nolan, suggests the provision of an air dryer, not the relocation of its air outlet.

Since applicants believe they have demonstrated the novelty of independent claim 1 over the cited Nolan in view of Kojima, they believe it is not necessary to separately address the rejection of dependent claims 3-12 and 14 over Nolan in view of Kojima, Moore, and the Grainger catalog (Action at Para. 7).

B. Apparatus Claims 15-27

Claims 15 and 16 stand rejected under 35 U.S.C. 103(a) as unpatentable over Westphal '072 in view of Kojima '801. Action at para. 5. Additionally, claims 17-27 stand rejected under 35 USC 103(a) as unpatentable over Westphal in view of Kojima, Moore '019 and the Grainger catalog. Action at para. 9. Applicants traverse these rejections with arguments very similar to those in section A above.

Amended independent claim 15 requires: An air compressor assembly for supplying compressed air to a load, the air compressor assembly comprising:

an air tank for containing air at an elevated pressure, the air tank having an air access port positioned at a bottom portion of the air tank;

an air compressor for supplying air for storage in the air tank;

a first tubing connecting the air compressor to a manifold assembly; and

a second tubing connecting the manifold assembly to the air access port;

wherein compressed air in the air tank is discharged through the air access port, the second tubing, and the manifold assembly ~~during air usage~~ when supplying compressed air to the load.

Westphal '072 does not disclose an air outlet port at the bottom portion of its air tank 12. Rather, Westphal '072 teaches the conventional location of its air outlet port in a top portion of tank 12. The Examiner acknowledges this (Action Para. 6) and argues that Kojima '801 teaches the provision of "an air outlet port (21) positioned at a bottom portion (clearly seen in figure 1) of a compressed air tank (3 and 4) and an open end of a hollow conduit (63)." Applicants respectfully disagree with the Examiner characterization of the Kojima components cited.

Kojima's "opening 21 of a relatively large size [is adapted to hold an] air dryer device 22." Kojima '801 col. 3 lines 23-25. Air dryer 22 is located in opening 22 to serves as the principal inlet port (not outlet) to the storage tank 1. Compressed air enters tank 1 via dryer 22/23 through air inlet port 56. Kojima '801 col. 4 lines 58-64. Tube 63 and associated drain valve 57 serve only to blow down accumulated oil and condensate from the dryer 22/23. Kojima '801 col. 5 lines 10-35. In this function and location, drain valve 57 and tube 63 are essentially the same as Kojima's discharge cock 10 (Kojima '801 col. 2 lines 59-64).

Additionally, Kojima's drain valve 57 and tube 63 are not connected to a manifold assembly and do not serve as part of the outlet air flow path to any compressed air load served by the Kojima device. The air outlet for supplying loads of the Kojima air dryer unit is located at port 6. Kojima '801 col. 2 lines 56-59. In Westphal '072 the air access port and manifold 24/26/28/30 are already located in a similar position. See Westphal '072 Fig. 4.

Furthermore, even if Kojima showed more than it does, alone or in combination with Westphal '072 it would not suggest the present invention. Kojima is an air dryer. The provision of an air dryer in a compressed air system is intended to prevent the accumulation of significant amounts of condensate in a compressed air tank and/or to

avoid entraining oil or water in the air supplied to a load. See Kojima '801 col. 1 lines 10-19. In contrast, the present invention is intended for use in compressed air systems (like Westphal '072) where no air dryer has been provided (to hold down cost and complexity) and where the loads can tolerate the entrainment of some condensate in the compressed air provided. *See* Specification Paras. 6 and 9. By locating its outlet port so as to deliberately entrain condensate in the compressed air sent to loads, the present invention is able to keep the tank interior dryer, but at the cost of making its compressed air unsuitable for some applications where dry air is required, as is apparently the case with Westphal. Therefore, Kojima, if it suggests any modification of Westphal, suggests the provision of an air dryer, not the relocation of its air outlet.

Since applicants believe they have demonstrated the novelty of independent claim 15 over the cited Westphal in view of Kojima, they believe it is not necessary to separately address the rejection of dependent claims 16 over the same or the rejection of dependent claims 17-27 over Westphal in view of Kojima, Moore, and the Grainger catalog.

C. Apparatus Claims 28-40

Claims 28, 29, and 39 stand rejected under 35 U.S.C. 103(a) as unpatentable over Westphal '072 in view of Strubel '131. Action at para. 11. Additionally, claims 30-38 stand rejected under 35 USC 103(a) as unpatentable over Westphal in view of Strubel '131 and further in view of Moore '019. Action at para. 13. Applicants traverse these rejections.

Independent claim 28 is amended herein to require: An air compressor assembly for supplying compressed air to a load, the air compressor assembly comprising:

an air tank for containing air at an elevated pressure having an air access port thereof, the air access port ~~being~~ comprising an open end of a centrally hollow conduit positioned inside the air tank and proximate to a bottom surface of the air tank;

an air compressor for supplying air for storage in the air tank;

a first tubing connecting the air compressor to a manifold assembly; and

a second tubing connecting the manifold assembly to the air access port;

wherein compressed air in the air tank is discharged through the conduit, the air access port, the second tubing, and the manifold assembly ~~during air usage~~ when supplying compressed air to the load.

Westphal '072 does not disclose an air access port comprising a centrally hollow conduit open at an end positioned inside and proximate to the bottom of the air tank. Rather, Westphal '072 teaches the conventional location of its air outlet port in a top portion of tank 12. The Examiner acknowledges this (Action Para. 12) and argues that it would have been obvious to modify Westphal in view of Strubel '131 which teaches the provision of "an air access port (6) being an open end of a centrally hollow conduit (5) positioned inside the air tank (1)" Id.

In replying to earlier rejections Applicants have previously argued that Strubel is not analogous prior art and/or that there is no suggestion to modify Westphal in view of Strubel, but the Examiner is not persuaded by those arguments. Action para. 16. The Examiner states that" it is unnecessary for the prior art to address the same problems identified by the Applicant as long as the structure taught by the prior art satisfies the limitations of the claims." This may be true if the Examiner was citing to a single reference that met all the limitations. Here, however, the Examiner is proposing to modify a primary reference (Westphal) in views of a secondary reference (Strubel), and so there must be a suggestion or motivation to combine the elements of the two references in a way that satisfies the claim limitations. There is no such suggestion or motivation.

Strubel '131 is directed to a "transport container . . . for retaining very pure liquid chemicals." Strubel '131 col. 1 lines 6-8. Strubel's liquid transport container is intended to store a liquid and discharge it be means of an overlying blanket of pressurized gas. Strubel '131 col. 3 line 6 to col. 4 line 8. The function and structure of Strubel '131 clearly is not concerned about accumulating condensate and associated corrosion.

So, why would one modify Westphal by the addition of the interior pipe/conduit shown in Strubel '131? What would be the motive for that combination of elements? The Examiner, in his remarks at Para. 12, points to a portion of Struble and states it would be obvious "as a means of making possible the greatest emptying of fluid from the tank." As noted above, Strubel is a liquid container. It is all about removing liquid, so citing to its reasons is circular. The question is: why would one want to remove liquid from Westphal? Westphal is an air compressor with an air tank for supplying air, not liquid. It does not contemplate removing liquid. Indeed, Westphal does not appear to even include a conventional blow down drain valve. So the desirability of removing liquid condensate from Westphal and doing so with the inner conduit from Strubel comes only from the hindsight knowledge of the problem identified and the solution offered in the subject application. Therefore, the Applicants maintain their position that the Examiner has not satisfied his obligation to make a prima facie case for the obviousness of the proposed combination.

Since the Applicants believe they have demonstrated the novelty of independent claim 28 over the cited Westphal in view of Strubel, they believe it is not necessary to separately address the rejection of dependent claims 29 and 39 over the same, or the separate rejection of dependent claims 30-38 and 40 over Westphal in view of Strubel and in further view of Moore.

D. Method Claims 41-43

Method claims 41 -43 stand rejected under 35 U.S.C. 103(a) as unpatentable over Nolan '437 in view of US 4,665,801 to Kojima. Applicants traverse that rejection for all the reasons *mutatis mutandis* articulated above regarding apparatus claims 1-14, which were rejected on the same grounds and in the same portion of the Action. The Applicants reasons being principally that Kojima '801 does not teach "supplying one of an air outlet port, an air access port, and an open end of a hollow conduit positioned at a bottom portion of the air tank" and "discharging condensate within the air tank into compressed air being released from the air tank during air usage", nor does it suggest a combination with Nolan '437 that would do so. *See* Section A above.

For all the reasons above, Applicants respectfully request reconsideration of the claims.

Respectfully submitted

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